

USB Type-C ENGINEERING CHANGE NOTICE

Title: Captive Cable and Thumb Drive Clarifications regarding SOP'

Applied to: USB Type-C Specification Release 2.0, August 2019

Brief description of the functional changes proposed:
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Clarifies that all captive cables that are intended to carry more than 3A or has USB4 functionality must respond to SOP' with a proper Cable ID response when queried. Note that even a device that does not have an actual cable but terminates in a plug, e.g. a thumb drive, has to respond to SOP' if it intends to receive higher than 3A or USB4 signaling – this might not have been apparent to designers.
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Benefits as a result of the proposed changes:
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Adds clarification only ... although not previously documented in the captive cable section of the spec, this should have been already apparent if products with captive cables were to expect support for higher than 3A current or USB4 signaling.
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An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
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Should have no impact on properly designed existing products.

An analysis of the hardware implications:
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Should have no impact on properly designed existing products.

An analysis of the software implications:
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Should have no impact on properly designed existing products.

An analysis of the compliance testing implications:
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Should already be functionally covered.

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Changes given below using mark-up text:

Chapter 3 updates:

3.4.3 USB Type-C Captive Cable Assemblies

A captive cable assembly is a cable assembly that is terminated on one end with a USB Type-C plug and has a vendor-specific connect means (hardwired or custom detachable) on the opposite end. The cable assembly that is hardwired is not detachable from the device.

The assembly wiring for captive USB Type-C cables follow the same wiring assignments as the standard cable assemblies (see Table 3-10 and Table 3-11) with the exception that the hardwired attachment on the device side substitutes for the USB Type-C Plug #2 end.

The CC wire in a captive cable shall be terminated and behave as appropriate to the function of the product to which it is captive (e.g. host or device).

A device (Sink, UFP or DRP) with a captive cable assembly shall respond to SOP' cable identity inquiries when the device either sinks higher than 3A current or supports USB4 operation. The physical location of the eMarker can be either within the captive cable or the device with the cable.

This specification does not define how the hardwired attachment is physically done on the device side.

Chapter 3 additions:

3.4.4 USB Type-C Thumb Drive Assemblies

A thumb drive assembly is as assembly that incorporates a USB Type-C plug as its primary USB interface. This assembly does not functionally include a cable assembly.

A thumb drive device (Sink, UFP or DRP) shall respond to SOP' cable identity inquiries when it either sinks higher than 3A current or supports USB4 operation.